Met Office 3-month Outlook

Period: November 2020 – January 2021 Issue date: 22.10.20

The forecast presented here is for November and the average of the November-December-January period for the United Kingdom as a whole. The forecast for November will be superseded by the long-range information on the public weather forecast web page (www.metoffice.gov.uk/public/weather/forecast/#?tab=regionalForecast), starting from 3rd November 2020.

This forecast is based on information from observations, several numerical prediction systems and expert judgement.

SUMMARY – TEMPERATURE:

For November, above-average and below-average temperatures are approximately equally likely. For November-December-January as a whole, above-average temperatures are slightly more likely than below-average temperatures.

Overall, the probability that the UK-average temperature for November-December-January will fall into the coldest of our five categories is 15%, and the probability it will fall into the warmest of our five categories is between 20% and 25% (the probability for each of these categories is 20% based on the 1981-2010 climate)

CONTEXT:

Global drivers begin to have greater impact on UK weather in the lead-up to winter, which results in higher confidence than in the summer.
La Niña is now established in the tropical Pacific Ocean and is forecast to become a moderate to strong event in the Outlook period. La Niña increases the likelihood of northerly or northwesterly winds in early winter, increasing the chances of below-average temperatures.
The Madden-Julian Oscillation (MJO), a slow-moving pulse of thundery activity that migrates along the equator, is expected to favour a reduction in the strength of westerly winds over the UK in November, leading to an increased likelihood of below-average temperatures.
The Quasi-Biennial Oscillation (QBO), a variation of winds in the tropical stratosphere, is in a westerly phase this winter. This increases the chances of mild westerly winds over the UK and above-average temperatures.

Patterns of North Atlantic sea surface temperatures also moderately favour westerly winds and above-average temperatures.
Long-range prediction systems from prediction centres around the world generally show increased chances of northwesterly winds in the Outlook period, consistent with the effect of La Niña. The chances of below- and above-average temperatures are similar in November (see left-hand graph of figure T2), as the La Niña influence counterbalances the increased probabilities of above-average temperatures associated with the warming of UK climate. For November-December-January as a whole, the likelihood of above-average temperatures moderately exceeds that of below-average temperatures (see right-hand graph of figure T2). Nevertheless, the chances of cold spells are higher for this season than has typically been the case in recent years.

Fig T1

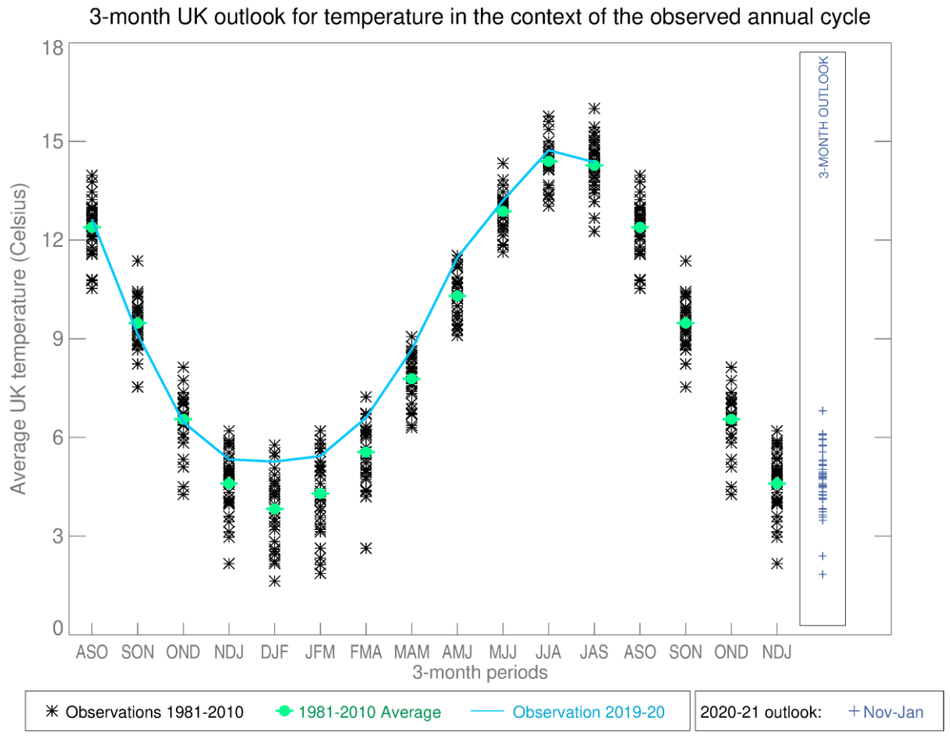


Fig T2

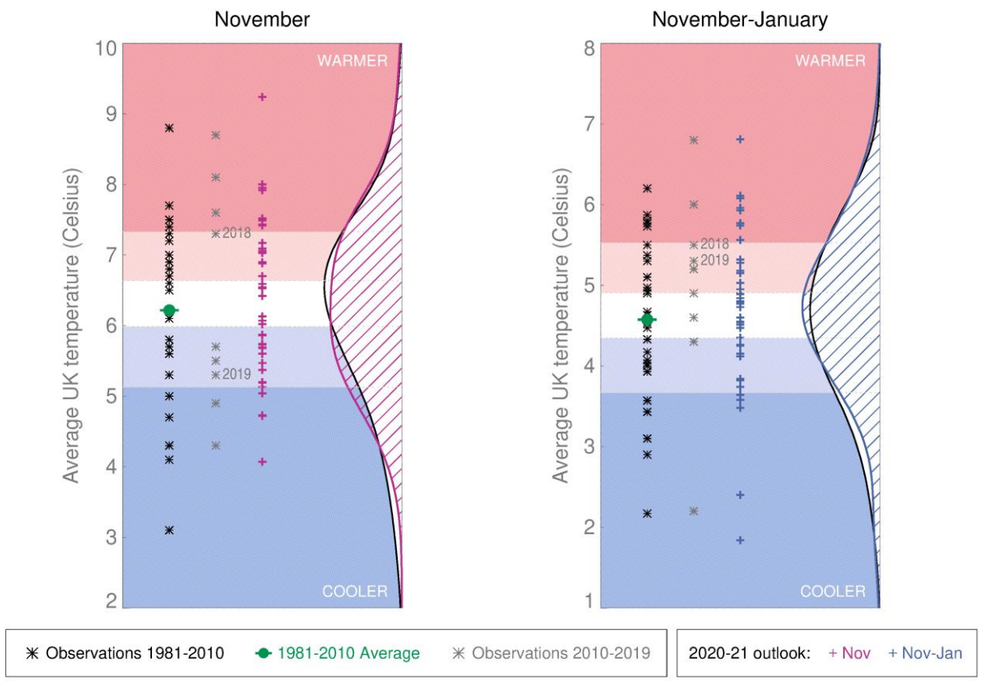
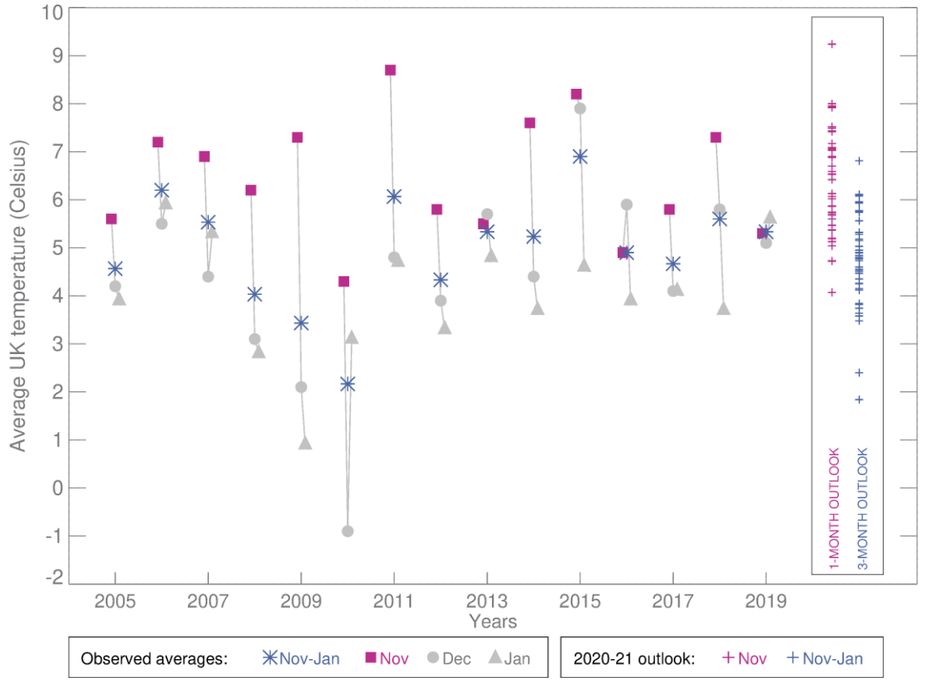


Fig T3



This Outlook provides an indication of possible temperature and rainfall conditions over the next 3 months. It is part of a suite of forecasts designed for contingency planners.

The Outlook should not be used in isolation but should be used with shorter-range and more detailed (30-day, 15-day and 1-to-7-day) forecasts and warnings available to the contingency planning community from the Met Office.